

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (canceled)

Claim 2 (currently amended): A system for providing a communication data link, comprising: as recited in claim 1,

(A) a base unit, having a modulator and a demodulator;

(B) an extension unit, having a modulator and a demodulator; and

(C) a power line communication channel connecting said base unit with said extension unit;

wherein said modulator of said base unit further comprises:

(1) an encryptor;

(2) an encoder electrically connected to said encryptor;

(3) an interleaver electrically connected to said encoder;

(4) a differential encoder electrically connected to said interleaver;

(5) a channel mapper electrically connected to said differential encoder;

(6) a specific modulator electrically connected to said channel mapper;

(7) an upsampler and filter electrically connected to said specific modulator;

(8) an upconverter electrically connected to said upsampler and filter;

(9) a D/A converter electrically connected to said upconverter;

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- (10) a power coupler electrically connected to said D/A converter; and
  - (11) a connector connecting said power coupler to said AC power line.

Claim 3 (currently amended): A system for providing a communication data link,  
comprising: as recited in claim 1,

- (A) a base unit, having a modulator and a demodulator;
- (B) an extension unit, having a modulator and a demodulator; and
- (C) a power line communication channel connecting said base unit with said extension unit;

wherein said modulator of said extension unit further comprises:

- (1) an encryptor;
- (2) an encoder electrically connected to said encryptor;
- (3) an interleaver electrically connected to said encoder;
- (4) a differential encoder electrically connected to said interleaver;
- (5) a channel mapper electrically connected to said differential encoder;
- (6) a specific modulator electrically connected to said channel mapper;
- (7) an upsampler and filter electrically connected to said specific modulator;
- (8) an upconverter electrically connected to said upsampler and filter;
- (9) a D/A converter electrically connected to said upconverter;
- (10) a power coupler electrically connected to said D/A converter; and
- (11) a connector connecting said power coupler to said AC power line.

Claim 4 (currently amended): A system for providing a communication data link,  
comprising: as recited in claim 1,

- (A) a base unit, having a modulator and a demodulator;
- (B) an extension unit, having a modulator and a demodulator; and
- (C) a power line communication channel connecting said base unit with said extension unit;

wherein said demodulator of said base unit further comprises:

- (1) a power line coupler electrically connected to said AC power line;
- (2) an A/D converter electrically connected to said power line coupler;
- (3) an IF to baseband converter electrically connected to said A/D converter;
- (4) a down sampler electrically connected to said IF to baseband converter;
- (5) specific demodulator electrically connected to said down sampler;
- (6) a channel demapper electrically connected to said specific demodulator;
- (7) differential decoder electrically connected to said channel demapper;
- (8) a decoder electrically connected to said differential decoder; and
- (9) a decryptor electrically connected to said decoder.

Claim 5 (currently amended): A system for providing a communication data link,  
comprising: as recited in claim 1,

- (A) a base unit, having a modulator and a demodulator;
- (B) an extension unit, having a modulator and a demodulator; and
- (C) a power line communication channel connecting said base unit with said extension unit;

wherein said demodulator of said extension unit further comprises:

- (1) a power line coupler electrically connected to said AC power line;
- (2) an A/D converter electrically connected to said power line coupler;
- (3) an IF to baseband converter electrically connected to said A/D converter;
- (4) a down sampler electrically connected to said IF to baseband converter;
- (5) specific demodulator electrically connected to said down sampler;
- (6) a channel demapper electrically connected to said specific demodulator;
- (7) differential decoder electrically connected to said channel demapper;
- (8) a decoder electrically connected to said differential decoder; and
- (9) a decryptor electrically connected to said decoder.